

US EPA ARCHIVE DOCUMENT

108801

## VALIDATION SHEET

CRF#

PAGE OF

FORMULATION:			IA	IB	T	FW	EC	R		
% a.i.	SC#	CHEMICAL NAME	Validator:						Date:	
Technical		CGA-24705 Metolachlor	R. Balcomb						7/21/78	
			Test Type:							
			Avian LD <sub>50</sub> :							
			Mallard Duck							
			Test ID.# ES-C							

CITATION: Fink, Robert, 1976. Acute Oral LD<sub>50</sub> -- Mallard Ducks CGA-24705 Technical Final Report. Wildlife Research Division, Truslow Farms Incorp. Project No. 108-117.

VALIDATION CATEGORY: Supplemental

RESULTS: LD<sub>10</sub> = 2150 (1111-4160) mg/kg  
 LC<sub>50</sub> = 4640 (2398-8977) mg/kg  
 LD<sub>90</sub> = 9700 (5013-18,770) mg/kg.

This reviewer obtained comparable results by a Finney-Probit technique, i.e., LD<sub>50</sub> = 4597 (2998-7047) mg/kg -- Chisquare = 0.050.

PROCEDURE: Mallard ducks were raised from the egg to age 14 days at which time they were randomly (see special note) assigned to control, dieldrin-control and experimental groups. Starter ration and water were available ad libitum throughout the study. The experimental material and dieldrin were dissolved in corn oil and intubated into the crop. Control birds received just corn oil. Body weight, food consumption, and toxic symptoms were recorded during the study. The data was analyzed by the Litchfield/Wilcoxon method.

VALIDATION CATEGORY RATIONALE: The study has been assigned a supplemental classification as the required fasting period, 15 hours prior to testing, was not described. The report states:

"Prior to initiation of and during the eight-day LD<sub>50</sub> study the basal diet for all birds was Truslow Farms' game bird starter ration. Starter ration and water were available ad libitum throughout the study."

In the absence of a description of a fasting period this dietary information is taken to imply that there was not one.

TEST REPAIRABILITY: The test may be upgraded to core status if the experimenter (Robert Fink) fasted the birds prior to intubation.

SPECIAL NOTE: It has been observed from the body weights that the birds may not have been assigned to control and test groups on a random basis, i.e. the means for the groups were: (1) test groups - 205.2 g, (2) dieldrin/control groups=188.2 g, and (3) control groups = 179.8 g. This issue is being followed by personnel in EEB and a lab audit is anticipated.

10p00 PL

1000 Tivoli

<1000 Austell

3-BR

45 min. - 1 hr drive from Port Lavaca  
Brookhaven, 3-BR (40,000)

25 - 80

1500/ac

Sample

Body weight (g)

1-control

209.2

205.2

210.5

202.1

2-control

223.8

231.2

223.9

3-2500

210.8

203.6

187.2

4-3600

216.4

219.6

181.1

5-5000

190.8

195.2

163.1

6-7500

203.6

202.2

156.0

7-10p00

184.4

191

Dietary level (ppm)	weight gain (g)				$\Sigma$	$\bar{x}$	$s^2$
	before treatment $\sigma$	treatment $\phi$	during treatment $\sigma$	treatment $\phi$			
0	-4.2	-7.4	5.3	-8.3	-13.6	-3.4	
2500	-7.2	-1.0	-16.4	-46.6	-66.2	-16.6	
3600	3.2	5.4	-38.5	-44.6	-74.5	-18.6	
5000	4.4	10.6	-32.1	-63.2	-80.3	-20.1	
7500	-1.4	22.0	-46.2	-47.4	-73.0	-18.2	
10000	7.0	5.0	-28.1	-76.5	-92.6	-23.2	
$\Sigma$	1.8	34.6	-156.0	-280.6			
$\bar{x}$	0.6	5.8	-26.0	-46.8			
$s^2$							
Columns:							
	$\bar{x}_1$	$\bar{x}_2$	$\bar{x}_3$	$\bar{x}_4$			
	0.6	5.8	-26.0	-46.8			
Rows:							
	$\bar{x}_1$	$\bar{x}_2$	$\bar{x}_3$	$\bar{x}_4$	$\bar{x}_5$	$\bar{x}_6$	
	-3.4	-16.6	-18.2	-18.6	-20.1	-23.2	

Rows

C. PGM 6  
IC. DP 17

159.59  
-4.2  
1.  
-7.4  
5.3  
-7.3  
4.  
-3.4  $\bar{X}_1$   
-3.4  
26.85  $S_1$   
-7.2  
1.  
-16.4  
-41.6  
4.  
-16.55  $\bar{X}_2$   
-16.55  
239.1875  $S_2$   
239.1875  
3.2  
1.  
5.4  
-38.5  
-44.6  
4.  
-18.625  $\bar{X}_3$   
-18.625  
530.811875  $S_3$   
530.811875  
4.4  
1.  
10.6  
-32.1  
-63.2  
-4.  
1.  
-16.4  
-41.6  
4.  
-16.55  $\bar{X}_4$   
-20.075  
886.086875  $S_4$   
886.086875  
-1.4  
1.  
2.  
-46.2  
-47.4  
4.  
-18.25  $\bar{X}_5$   
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883.7275  $S_5$   
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7.  
1.  
1.  
-28.1  
-76.5  
4.  
-23.15  $\bar{X}_6$   
-23.15  
1143.0425  $S_6$   
1143.0425  
1143.0425  
1143.0425  
5. DFN  
2290283723  
2290283723  
F < 2.77  
18. DFD  
18.  
14838.965  $SSE$   
14838.965  
944.04  $SST$   
944.04  
15783.005  $SST$   
15783.005  
-32.1  
-63.2

Columns

15783.005  
C. PGM 6

159.59  
-4.2  
1.  
-7.2  
5.3  
-7.3  
4.  
-3.4  $\bar{X}_1$   
-3.4  
26.85  $S_1$   
-7.2  
1.  
-16.4  
-41.6  
4.  
-16.55  $\bar{X}_2$   
-16.55  
239.1875  $S_2$   
239.1875  
3.2  
1.  
5.4  
-38.5  
-44.6  
4.  
-18.625  $\bar{X}_3$   
-18.625  
530.811875  $S_3$   
530.811875  
4.4  
1.  
10.6  
-32.1  
-63.2  
-4.  
1.  
-16.4  
-41.6  
4.  
-16.55  $\bar{X}_4$   
-20.075  
886.086875  $S_4$   
886.086875  
-1.4  
1.  
2.  
-46.2  
-47.4  
4.  
-18.25  $\bar{X}_5$   
-18.25  
883.7275  $S_5$   
883.7275  
7.  
1.  
1.  
-28.1  
-76.5  
4.  
-23.15  $\bar{X}_6$   
-23.15  
1143.0425  $S_6$   
1143.0425  
1143.0425  
1143.0425  
5. DFN  
2290283723  
2290283723  
F < 2.77  
18. DFD  
18.  
14838.965  $SSE$   
14838.965  
944.04  $SST$   
944.04  
15783.005  $SST$   
15783.005  
-32.1  
-63.2

Rows  
Columns

15783.005  $SST$   
10705.45833  $SSE$   
944.04  $SST$   
12.94960816  $F_{23,4}$   
5. DFN  
15. DFD  
0.68516159  $F_{23,4}$   
5. DFN  
15. DFD

84.4588889  
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1.  
-16.4  
-38.5  
-32.1  
-46.2  
-28.1  
6.  
-26.  $\bar{X}_3$   
-26.  
279.6266667  $S_3$   
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-7.3  
1.  
-41.6  
-44.6  
-63.2  
4.  
-47.4  
-76.5  
6.  
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457.2555556  $S_4$   
457.2555556  
14.05594609  $F_{23,10}$   
14.05594609  
5. DFN  
20. DFD  
20.  
5077.546667  $SSE$   
5077.546667  
10705.45833  $SST$   
10705.45833  
15783.005  $SST$   
15783.005